January 14 - 20, 2005

The ninth Terra re-engineering meeting was held on January 18. The group continues to merge the goals of the developers with the experience of the operation team to define a set
of requirements that can satisfy the operations concept.

A review of the current state of procedures/contingencies to support a recycle of the Solid
State Recorder (SSR) was completed this week. Although NASA HQ and Goddard decided to put on
hold this low risk activity until another PWA loss, the Flight Operations Team (FOT) will
continue refining procedures and contingencies. The idea then is to complete this work with a
review (CAM) within the next couple of weeks. When another PWA failure does occur, we will be
ready to quickly (within 2 weeks) recycle the SSR.

Four MIRs occurred this week having to do with the High Gain Antenna Motor Drive Assembly (MDA2) BITE failures while in the South Atlantic Anomaly (SAA). The increase of these failures is attributed to recent solar activity. In all cases there was no impact to science objectives and no data loss.

Ground System and Data Processing System Anomalies/Issues:
Two MIRs occurred this week having to do with K-band dropouts with TDS during science data playback. This is a common problem that occurs more frequently (1-2 times per week) this time of year. No science data were lost due to replaying data during the same TDRSS contact.

One MIR occurred this week involving a bit rate error on the Q-channel (Quadrature) of the downlink modulator. Although there was no impact to science objectives, this bit error status will continue to be monitored.

One MIR occurred this week involving a science playback that stopped due to a command bit flip internal to the SSR. This problem occurs approximate once per month. In this case, the Science playback procedure was aborted and restarted. Science playback then proceeded nominally. There was no impact to science objectives and no data loss.

One MIR occurred this week having to do with a late acquisition of approximately 1:40. There was no impact to science objectives and no data loss.

One MIR occurred this week involving two dropped ASTER Commands in the ATC. The cause has not been identified but is under investigation. Since we were unable to fix the problem prior to ATC uplink time, the ATC load went as is. This then prevented 1 ASTER observation from occurring (017/20:00:12 - 20:03:42z). A similar occurrence was observed on 11/24/04 affecting Direct Broadcast. The testing team was unable to duplicate the problem then, however, was able to

duplicate this more recent occurrence. This should help in the investigation of the MMS Software.